

GILLEMOY L

Distr: UK20

100. Nitriding titanium steels. (In German) In. 0111.
Mol. M. Tschirky. Periodica Polytechnica, engineer.
Vol. 3, 1958, No. 4, pp. 1-17, 8 figs., 2 tabs.

The endurance limit of steels measured on polished test specimens increases in proportion with their tensile strength. With sharply notched specimens however the endurance limit of high-tensile tempered steels hardly differs from that of low-tensile mild steels. Nitriding is very suitable for increasing the endurance limit of sharply notched machine parts but the lengthy processing prevents its widespread use. Steels alloyed with titanium may be nitrided independent of their composition in a very short time, a case thickness of 0.7-0.8 mm can be obtained in 8 hours. Hardness and character of the nitrided case are a function of the Ti to C ratio. A relatively soft, deformable case may be developed on steels when the Ti to C ratio is less than 4, max. case hardness is 600 DPH, hardness gradually reduces in the direction of the core. The second group of nitriding titanium steels is constituted of steels possessing a Ti to C ratio exceeding 4. These steels can be nitrided to considerable hardness, hardness increases in proportion to the Ti to C ratio, e.g. with Ti : C = 20 a case hardness of 1400 DPH is attained. The hardness of these hard nitrided cases is uniform, decreasing sharply in the direction of the core. The endurance limit of nitrided and then polished specimens made of soft-nitrided steels attains that of high-tensile tempered steels, in a sharply notched temper steel specimen by about 50%.

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GILLMUT, L.

The tale of the testing of materials in up-to-date machine sizing. In German.
p. 251.

PERIODICA POLYTECHNICA. ENGINEERING. (Budapest Műszaki Egyetem.)
Budapest, Hungary. Vol. 2, no. 4, 1958.

Monthly list of East European Acces-sions (EEAI) EC, vol. 8, no 2, July 1959.

Uncl.

GILLEMET, Laszlo, dr., Kossuth-dijas, egyetemi tanar

Scientific research and the innovation movement. Ujít lap 12 no.19:
7-8 10 0 '60.

1. Magyar Tudomanyos Akademia levelező tagja.

GILLENOT, L.

Experiences with a new kind of diploma. wor'. p. 117.

PERIODICA POLYTECHNICA. ENGINEERING. (Budapesti Műszaki Egyetem, Budapest, Hungary. Vol. 3, no. 2, 1959.

Monthly List of East European Accessions (SEAL). Vol. 3, no. 12, Dec. 1959.

Uncl.

HORGOS, Gyula, dr., mussaki tudomanyok kandidatusa (Budapest); GILLEMET,
Laszlo, dr., ketszeres Kossuth-dijas egyetemi tanar; FREUDENTHALL,
A. M., dr. (USA); KRAINER, E., dr. (Austria); MUCSI, Endre;
DEVENYI, Miklos

An account of the 2d Congress of Testing of Materials. Ujito lap 13
no.15:8 Ag '61.

1. Koho- és Geipiari miniszterhelyettes (for Horgos) 2. Columbia
University, New York, USA (for Freudenthal) 3. Altalanos Geptervezo
Iroda (for Mucsi) 4. Kemenyfemipari Vallalat (for Devenyi)

(Testing)

S/137/62/000/007/043/072
A057/A101

AUTHORS: Gillemot, L., Rónay, M.

TITLE: Steels which show a negligible effect of cold deformation upon the tendency to brittle fracture

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1962, 35, abstract 71201
("Veta techn. Akad. scient. hung.", 1961, 35 - 36, 185 -195, German)

TEXT: Reasons for the increase of the tendency to brittle fracture of steel, preliminarily treated by cold deformation (CD) were investigated, and recommendations given for the diminution of the destructive effect of CD. Fine-grained steel with 1.15% C and 0.75% Ti was investigated. The tempered steel was deformed by cold drawing with a shrinkage of 10 - 90%, and afterwards were determined H_V , $\sigma_{0.2}$, σ_b , ψ , the effective stresses and specific work of rupture at tension, and also a_k in dependence of the degree of CD. It is demonstrated that with an increase of the degree of CD to 25% (corresponding to the limit of uniform elongation at tension), H_V , $\sigma_{0.2}$, and σ_b increase (σ_b - to 65 kg/mm², $\sigma_{0.2}$ - to 60 kg/mm²), while ψ decreases. The change of the mentioned characteristics is

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Steels which show a...

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A057/A101

connected with the formation of new slip (S) surfaces. Subsequent increase of the degree of CD to 65 - 70% does not change these characteristics, which is explained by the laminar S along the existing S surfaces. A further increase of the degree of CD effects again a rise of H_v , 10.2 and 1, and decrease of ϵ , which is connected with the stop of laminar S and the formation of a new front of dislocations in connection with the bending of the S planes; S becomes herewith turbulent. Already at a small CD, a_p decreases sharply about twice (to 15 - 20 kgm/cm^2), and remains then up to CD 65 - 70% at this level without change. Until the same degree of CD no change occurs in the specific work of deformation. The embrittlement of steel in the CD process is connected with the presence of foreign atoms in the steel which are blocking dislocations. A considerable decrease of the tendency of steel to brittleness can be effected by adding elements to the steel which bind these atoms. There are 21 references.

A. Nikonov

[Abstracter's note: Complete translation.]

Card 2/2

GILLEMET, L., prof. (Budapest, XI., Bertalan Lajos u.6)

Contributions to the question of rigid fragility of welded joints.
Periodica polytechn eng 6 no.2: 7-113 '62.

1. Lehrstuhl fur Mechanische Technologie, Technische Universitat,
und Mitglied, Schriftleitung, "Periodica Polytechnica - Engineering".

GILLEMOT, Laszlo. dr.

A new type of steel usable in cold-working. Gepgyartastechn
3 no.6:201-204, 219 Je'63.

GILLEMOT, Laszlo, prof., dr. (Budapest, XI., Bertalan L.u.)

A new method for determining the brittleness danger. Periodica
polytechn eng 8 no.1:1-14 '64.

1. Lehrstuhl fur Mechanische Technologie, Technische Universitat,
Budapest. Submitted September 30, 1963.

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515110002-6
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515110002-6"

L 31357-66

ACC NR: AT6021142

SOURCE CODE: HU/2504/65/050/000/0021/0092

AUTHOR: Gillemot, L.—Zhil'mo, L. (Corresponding member MTA)

25
B+1

ORG: none

TITLE: Simplified method for plotting Haigh and/or Smith graphs

SOURCE: Academia scientiarum hungaricarum. Acta technica, v. 50, 1965, 81-92

TOPIC TAGS: graph theory, stress analysis, linear function

ABSTRACT: Affected by an alternating load superimposed onto a static mean stress, fatigue limit will be the function of the mean stress. The value of the alternating stress the superimposition of which to a given mean stress is still feasible, can be approximated by a cubical parabola. To plot the alternating stress value that can be still added to the static mean stress under a wide variety of conditions, the idea of introducing the actual stress causing fracture was introduced. Thus, it became possible to arrive at a simple linear relation between the static mean stress and the alternating stress, independent of sample shape and test temperature. The data required are only one result of static test and one result of fatigue limit test. Orig. art. has: 9 figures, 9 formulas, and 1 table. [Orig. art. in Eng.] [JPRS]

SUB CODE: 12, 20 / SUBM DATE: 16Nov64 / ORIG REF: 001 / OTH REF: 011

Card 1/1 CC

PETROV, L.P., redaktor; GILLENEVA, A.V., redaktor.

[Problema of combustion; collection of translated articles]
Voprosy gorenija. Sbornik perevodov statej. Moskva, Izd-vo
inostrannoi lit-ry. Vol. 1. 1953. 291 p.
(MLRA 7:1)
(Combustion)

GILLER, A.G.

Nikolai Mikhailovich Korobkov, 1897-1947. Vop.geog. no.51:190-91
'61. (MIRA 14:6)
(Korobkov, Nikolai Mikhailovich, 1897-1947)

GILLER, A.I.

KOZHEVIN, V.G., nachal'nik; INOSENTEEV, P.P., nachal'nik; BELEVTSIEV, T.N.,
upravlyayushchiy; GARYAZEV, V.V., upravlyayushchiy; GRACHEV, L.I., upravya-
yushchiy; KONOVALOV, G.I., upravlyayushchiy; GILLER, A.I., nachal'nik;
GUBIN, N.I., glavnnyy inzhener.

The Soviet miners honor Miners' Day with new industrial victories.
Ugol' 28 no.8:5-15 Ag '53. (MLRA 6:7)

1. Kombinat Kuzbassugol' (for Kozhevinn). 2. Kombinat Karagandaugol'
(for Inosentsev). 3. Trest Stalinugol' (for Belevtsev). 4. Trest Kalinin-
ugol' (for Gryazev). 5. Trest Molotovugol' (for Grachev). 6. Trest
Shchekinugol' (for Konovalov). 7. Shakhtoupravlenie No.9/12 tresta
Shchekinugol' (for Giller). 8. Shakhta No.34 tresta Krasnoarmeyskugol'
(Coal mines and mining)
(for Gubin).

GILLER, A.I., laureat Leninskoy premii; GROMOV, N.V., inzh.

Pillar extraction upon depletion of the main drifts. Ugol'
40 no.1:19-21 Ja '65. (MIRA 18:4)

1. Shakhtoupravleniye No.11-12 tresta Shchekunugol'.

DYSKINA, T.M.; GILLER, A.S.

Clinical and anatomical characteristics of ileocolic typhoid fever. Zdrav. Tadzh. 7 no. 2:28-32 Mr-Ap '60. (MIRA 13:10)

1. Iz kafedry infektsionnykh bolezney (zav. - dotsent D.M. Khashimov) Stalinabadskogo medinstituta im. Abuali ibni Sino i Stalinabadskoy gorodskoy infektsionnoy bol'nitsy.
(TYPHOID FEVER)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515110002-6
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515110002-6"

SHIRYAYEV, G.A., inzh.; GILLER, E.S., inzh.

Standardization of main structures in coal mining enterprises.
Shakht. stroi. no.12:7-10 D '57. (MIRA 11:1)

1. Institut TSentrogiproshakhtstroy.
(Mine buildings)

OSTROVSKY, M.Ye.; GILLER, E.S.; CHEREPOV, I.A.; MELIKHOVA, A.A.

Design for a new type of a chemical plant. Prom. stroi. 41
no.7:13-18 Jl '64. (MIRA 17:8)

GILLER, F.; KRAVTSOVA, A.

Quality of the pancreas. Mias. Ind. SSSR 34 no.4:56-58 '63.
(MIRA 16:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy
promyshlennosti.

ROZHKOY, F.; GILLER, I.

Make available to the masses the practices of those in front.
Metallurg 3 no.12:30-31 D '63. (MIRA 17:4)

1. Predsedatel' profsoyuznogo komiteta Magnitogorskogo metallurgicheskogo kombinata (for Rezhkov). 2. Nachal'nik normativno-issledovatel'skoy laboratorii Magnitogorskogo metallurgicheskogo kombinata (for Giller).

GILLER, I.R.

Utilization of the ANZh-2 apparatus for disinfection. Veterinariia
33 no.5:68 My '56. (MLRA 9:8)

1. Starshiy veterinaryy vrach Vereshchaginskoy mashino-traktornoy
stantsii, Molotovskoy oblasti.
(Disinfection and disinfectants)
(Spraying and dusting equipment)

GILLKR, I.R.

Biomycin in the control of paratyphoid in white mice. Lab. delo
8 [i.e.9] no.1 Ja '63. (MIRA 16:5)
(PARATYPHOID FEVER) (AUREOMYCIN)

GILLER, I.Ye.

TRAKHTER, B.S.; GARCHENKO, V.T.; GILLER, I.Ye.; SHAROPIN, V.D., redaktor;
MIKHAYLOV, O.A., redaktor; PETROVA, N.B., tekhnicheskiy redaktor.

[Operation cycle regulation in an open-hearth process plant] Regla-
mentirovannyj rezhim raboty martenovskogo tschka. Moskva, Gos.
nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1954.
83 p.

(Steel industry) (Industrial management)

LESHCHINER, M.M.; GILLER, I.Ye.

Increasing labor productivity and reducing production costs at the
Magnitogorsk Metallurgical Plant. Stal' 15 no.1:70-74 Ja '55.

(MLRA 8:5)

1. Magnitogorskiy metallurgicheskiy kombinat.
(Magnitogorsk--Metallurgical plants)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515110002-6"

GILLER, M. , LUNIS, V.

Greater attention to income and expenditure balance of enterprise. Den. i k
kred. 11, № 6, 1952.

GILLER, M.

Enlarge the sphere of decentralized clearing-house operations. Den.
i kred. 13 no.5:23-25 My '55. (MLRA 8:7)
(Leningrad Province--Clearing house)

PECHENIK, M.; TARASOV, M.; RAVICH, A.; GILLER, M.; EYZENBRAUN, R.;
PAVLOVA, D.

Clearing payments and the issue of credit on special loan
accounts. Den. i kred. 16 no. 4:48-59 Ap '58. (MIRA 11:5)
(Clearinghouse)

GILLER, M.

Practice of payment organization. Den. i kred. 18 no.9:54-58 S '60.
(MIRA 13:8)
(Leningrad--Transportation, Automotive--Finance)
(Payment)

GILLER, M. (Leningrad)

"Credit for commercial enterprises" by S.A.Skorokhodov. Reviewed
by M.Giller. Sov. torg. 35 no.8:49-50 Ag '62. (MIRA 15:8)
(Credit) (Retail trade) (Skorokhodov, S. A.)

GILLER, M.

Credit should be secured. Den. i kred. 21 no.7:29-30 Jl '63.
(MIRA 16:8)
1. Nachal'nik planovo-ekonomiceskogo otdela Leningradskoy
oblastnoy kontory Gosbanka.
(Leningrad Province--Credit)

GILLER, N.Y.

Processing the subtropical persimmon. Kons. 1 ov. prem. 14 no.8:
28-30 Ag '59.
(MIRA 12:9)

1. Sechinskiy konservnyy kombinat imeni Lenina.
(Persimmon)

GILLER, M. Ye.

Experience of the V.I. Lenin Sochi Canning Combine in
increasing the variety of products and combining various
lines of production. Kons.i ov.prom. 1^o no.4:41-42 Ap
'60. (MIRA 13:6)

1. Sochinskiy konservnyy kombinat imeni V.I. Lenina.
(Sochi--Canning industry--Equipment and supplies)

GILLER, M. Ye.

Use of sorbic acid in the preservation of fruits. Kons.i ov.prom. 16
no.4:21-22 Ap '61. (MIRA 14:3)

1. Sochinskiy konservnyy kombinat.
(Fruit--Preservation)(Sorbic acid)

KOZENFEL'D, I.L.; RUBINSHTEYN, F.I.; YAKUBOVICH, S.V.; PERSIANTSEVA, V.P.;
Prinimali uchastiye: GILLER, R.S.; KURSKAYA, A.G.

Studying chrome acid guanidine as a corrosion inhibitor for oil
paints. Lakolras, mat. i ikh prin. no.3:15-21 '62. (MIRA 15:7)
(Protective coatings)
(Guanidine)

VOL'F'KOVICH, S.I.; GIL'dER, M.Ye.; GOLOMBITZ, M.S.; OMARSS, A.A.;
EDIVCHIKOV, I.M.; DEMIN, V.Ye.

Production of fodder and defluorinated fertilizer phosphate.
Khim. prom. 43 no.1:19-22 Ja '65.

(TIR 18:2)

GILLER, S. A.

Giller, S. A. - "On the possible cause of bactericidal activity of certain organic compounds, in particular a derivative furan series," Izvestiya Akad nauk Latv. SSR, 1948, No. 12, p. 15-44, - Annotation in Latvian - Bibliog: 28 items

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)

HILLERS, S.

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Electronic Phenomena

Ultraviolet absorption spectra of 2-nitro-1,3-indandione.
I. Vanags, J. Eiduss, and S. Hillers. *Latvijas PSR Zinātņu Akad. Viestis 1949*, No. 8(Whole No. 25), 21-39(Russian summary, 39-40).—Absorption spectra of 2-nitro-1,3-indandione (I) and its salts were destd. in many solvents. In highly dil. aq. soln., the nitroindandione ion is the absorbing agent, and can be represented as a resonance hybrid of 3 out of a no. of possible valence structures. In solvents of low dielec. constns. such as ether and dioxane, in which the energy of shifting of the electrons is high, the enol form slowly transfers into the diketo form; the rate of reaction is proportional to the dielec. const. In 100% H_2SO_4 , the absorption is by a mol. form of I, characterized by a superposition of 3 other electronic structures; this form is an intermediate between the diketo and the enol forms. The spectrum of the Et ester of the indandionecarboxylic acid had analogous form, but with the absorption max. shifted by 700 Å towards higher frequency, which can be explained by structural considerations. Salts of I became colored on storage, and the spectra indicated that this is caused by intramol. shifts. A decrease in the ionization potential of the cation facilitates the formation of structures which absorb in the visible. The high ionization potential of Hg prevents formation of an ionic link and the salt of Hg with I remains colorless. Arguments in favor of H bonding in I are given.
A. Dravnieks

2/2/64

Detailed description of the reaction of α -bromo- β , β , β -triisopropenylbenzene with HNO_2 to give α -nitro- β , β , β -triisopropenylbenzene. α -Bromo- β , β , β -triisopropenylbenzene (10 g., 0.02 mole) was dissolved in 100 ml. of benzene and added to a solution of 10 g. of NaNO_2 in 100 ml. of water. The mixture was allowed to stand for 12 hours at room temperature. The benzene layer was separated and washed with water. The aqueous layer was acidified with 10% HNO_3 and extracted with ether. The ether extract was dried over calcium sulfate and the ether removed under reduced pressure. The residue was purified by crystallization from benzene to give 7.5 g. (75%) of α -nitro- β , β , β -triisopropenylbenzene, m.p. 105°C.

1. HILLERS, S.

2. SSSR (600)

4. Nitrofuran

7. Activities of the Academy of Sciences of the Latvian S. S. R. on the
industrial application and medical acceptance of new drugs.
Latv. PSR Zin. Akad. Vestis No. 12, 1950

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.



HILLERS, S.

Oxidation of furan to maleic anhydride by atmospheric oxygen in vapor- H_2O phase over a catalyst from oxides of vanadium. P. Kalnins, S. Hillers, and M. Tarvid. *Latvijas PSR Zinātās Akad., Matse 1951*, 443-52. Passage of air-furan mixts. through a glass tube over V_2O_5 -pumice catalyst give the following conversions to maleic anhydride. The best results are had with 3 sec. contact and a molar ratio of air to furan of 120-190 at 325°, when an 81-3% yield is secured (92-4% taking into account unreacted furan). It is suggested that the reaction proceeds by formation of the 2,5-d-HO deriv., which yields the 2,5-oxo deriv. or suffers ring cleavage with formation of $\text{HO}_2\text{CCH}_2\text{CH}=\text{CHCHO}$, which yields a lactone. Over a pure V_2O_5 catalyst some 27% furan is oxidized to $\text{CO}_2\text{-H}_2\text{O}$ and only 13% yields maleic anhydride; when the catalyst is fully "developed" with use and consists largely of V_2O_5 , some 46% conversion to maleic anhydride occurs. The high yields cited above result from a catalyst consisting of both V_2O_5 and V_2O_4 . G. M. K.

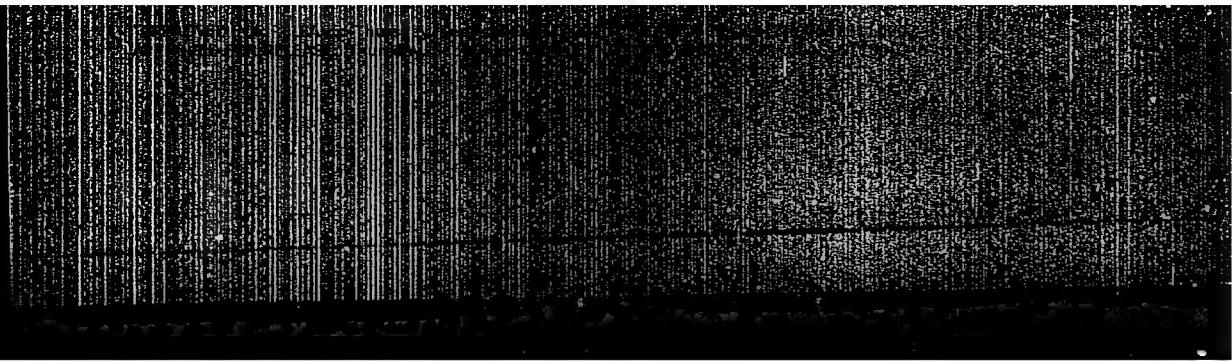
- GILLERS, S.
1. HILLERS, S.; KEDUSS, J.
 2. USSR 600
 4. Nitrofuran
 7. Ultraviolet absorption spectra of some nitrofurans, Latv. PSR Zin. Akad. Vestis, No. 8, 1951.
 9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

HILLERS, S.

1. HILLERS, S.; BERZINA, A.
2. USSR 600
4. Nitrofuran
7. Crystalline modifications of 5-nitro-2-furfurylidene-aminoguanidine sulfate,
Latv. PSR Zin. Akad. Vestis, No. 11, 1951.

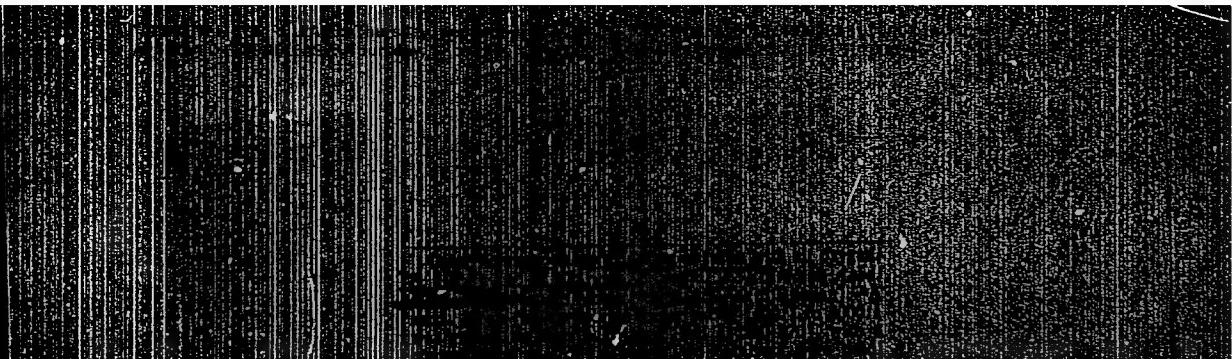
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncr.

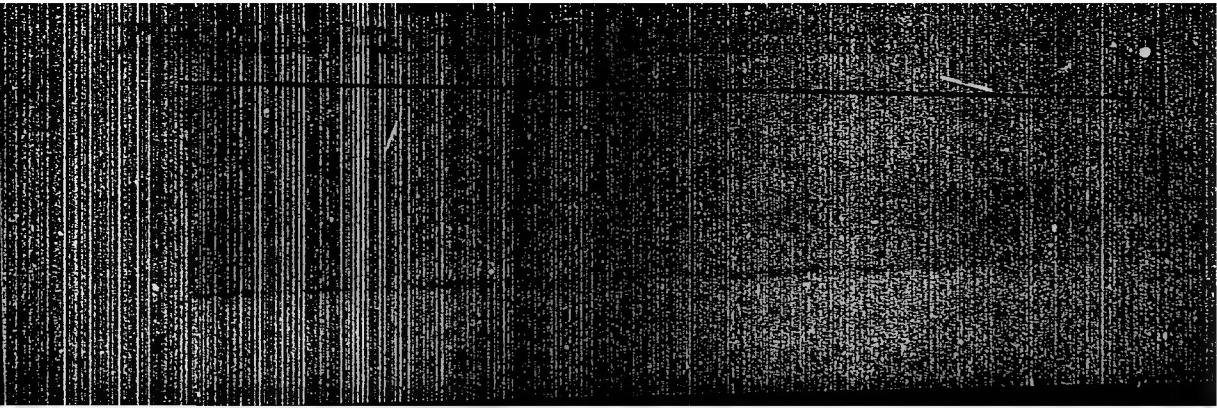




Adrian Dravetbeke

ANDREW DRWULEC, Ph.D., Department of Biochemistry,
University of Michigan, Ann Arbor, Michigan, M. Berndsen, and
M. T. Tamm, Department of Chemistry, University of Michigan, Ann Arbor, Michigan, M. Tamm, Department of Chemistry, University of Michigan, Ann Arbor, Michigan, M. Berndsen, and
No. 0-19516-00513R000515110002-6, Washington, D. C., Vols. 1962-
73. In the presence of a small amount of water, the reduced formic acid fraction of the pyridine nucleotides was converted by reduction with $NaBH_4$ to $SM\cdot H_2O$, or $SM\cdot H_2O$ and SO_2 in a vapor phase reaction with $NaBH_4$. Subsequent treatment with $NaBH_4$ and SO_2 caused re-oxidation with O_2 to form a mixture of hydroquinones. The reduced formic acid fraction had bacteriostatic activity in diln. of 1.5×10^{-6} as compared to 1.5×10^{-6} M for the pure
formic acid hydride. Andrew Drwulec.





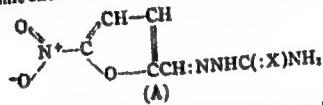
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The N.Y. product
was considered
worth 50%
more than the
Davison

GILIER, S. A.

Some investigations of the ultraviolet absorption spectra of nitrofurans. S. A. Gilier and N. O. Goldhaber. *Intern. Akad. Nauk SSSR Ser. Fiz. Pis. 17, 709-14 (1953).* Absorption spectra of the following furans were investigated and calculated: furan, furfural, 2-nitroluran, 5-nitrofuran, 5-nitrofurfural diacetate, 5-nitrofurfural semicarbazone, 5-nitrofurfural hydrazone, 5-(5-nitrofurylideneamino)benzaldehyde thiosemicarbazone, 5-nitro-2-bromofuran, 5,5'-dinitro-2,2'-dihydronephthalimide, 5-nitrosylvan. The introduction of the nitro group shifts the absorption band to longer wave lengths. From the identity of nitrofuran and nitrofurfural spectra in H₂O and the difference in glycerol soln. it can be concluded that nitrofurfural forms a hydrate. The bathochromic effect of the compds. of the type A is as follows:



for X = S $\lambda = 303 \text{ m}\mu$; for X = O $\lambda = 375 \text{ m}\mu$; for X = NH $\lambda = 385 \text{ m}\mu$. In alk. medium, pH 13, the absorption curve of a cherry-red soln. of nitrofurfural changes radically; a max. appears at 350 m μ . It is assumed that a negatively charged ion appears in alk. media. If the CHO group is replaced by H, Me, or Br, no coloration appears.

S. Pakawej

11-10-54

Institut lesokhozaystvennykh problem Akademii nauk Latviyskoy SSR.

GILLER, S. A.

Dissertation: "Investigation of Methods of Synthesis. Physicochemical Properties, and
Interrelation Between the Structure and Biological Activity of Some Substituted De-
rivatives of 5-Nitrofurfurilidenimines." Cand Chem Sci, Inst of Forestry Problems,
Acad Sci Latvian SSR, Riga, 1953. (Referativnyy Zhurnal--Khimiya, Moscow, No 12,
Jun 54)

SO: SUM 318, 23 Dec 1954

GILLER, S. A. -- "Study of the Methods of Synthesis, Physicochemical Characteristics, and Interrelationship Between the Structure and Biological Action of Certain Substituted 5-Nitrofurfuryldenimines." Acad Sci Latvian SSR, Inst of Forestry Problems 1954 (Dissertation for the Degree of Candidate of Chemical Sciences)

SO: Izvestiya Ak. Nauk Latvivskoy SSR, No. 9, Sept., 1955

RECEIVED FEDERAL BUREAU OF INVESTIGATION, U.S. DEPARTMENT OF JUSTICE
FEB 11 1968 BY R.D.P. SEC'D. REC'D. 2/11/68

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After the reaction was completed, the solution was cooled to room temperature and the precipitate was collected by filtration. The solid was washed with cold water and dried at 100°. Yield from 10 g. of benzene was 1.2 g. (12%).
 The infrared spectrum of the product showed a strong absorption at 3400 cm⁻¹. The hydrochloride was obtained by treatment of the product with HCl. It was more soluble in water at 20° than benzene, and its solubility increased with increasing temperature. It was soluble in benzene, and also in a mixture of nitrobenzene and concentrated sulfuric acid. A white precipitate was formed when the solution was treated with NaCl. A white precipitate was formed when the solution was treated with NaCl. Infrared spectra of the product were taken at various stages of the reaction.

100

PA - 2315

AUTHOR:

YANUSHKOVSKIY, V.YA., GILLER, S.A.

TITLE:

The Conference at Riga on the Use of Radio Isotopes. (Konfe-rentsija v Rige po primeneniyu radioizotopov, Russian).

PERIODICAL:

Atomnaja Energija, 1957, Vol 2, Nr 3, pp 285 - 286 (U.S.S.R.)

ABSTRACT:

Received: 4 / 1957 Reviewed: 5 / 1957
In December 1956 a scientific conference of the Academy of Science of the Latvian S.S.R. was held at Riga, dealing with the use of radioactive isotopes in technology, biology, and medicine, in which also scientists from Moscow, Leningrad, Tallin (Reval), Wilna, and other cities participated. The president of the Latvian Academy of Science reported that the institutes of this Academy carried out a number of investigations dealing with this subject within recent years. It is the task of this conference to demonstrate the principles on which these investigations were based.

Individual lectures dealt among others with the following subjects: The main trends in the application of radioactive isotopes in devices for automatic control, the application of radioactive isotopes within the field of medicine and biology, the application of gas discharge counters in contactless radioactive relays, radioactive marking of steels under industrial conditions in the Leningrad Steel Rolling Mill "MOLOTOV", the use of a radioactive donor in the device for automatic transition from one tele-

Card 1/3

PA - 2315

The Conference at Riga on the Use of Radio Isotopes.

kinematic projector to another in the telecenter of Riga, the radioactive indicators of the level of liquids in covered containers, a radioactive control device for the filling of non-transparent containers in assembly line production, the practical application of radioactive, regulating- and signalling devices worked out in the Physical Institute of the Academy of Science of the Latvian S.S.R. (in cooperation with the factory "BEF"), various wiring circuits for radioactive relays in gas discharge counters, the experimental application of gamma rays for the radiosscopic investigation of a thin metal, the application of scintillation counters in gamma-defectoscopy, the determination of the thickness of steel from the scattered gamma radiation, the attenuation of a parallel gamma bundle in layers of matter, the qualitative analysis of a mixture of radioactive isotopes from the half value periods, radioactive marked bacteria, the study of the penetration of pentode and other substances into the lignin by means of radiocarbon, the investigation of the dynamics of the shifting of chemical stimulators in the trunks of fir trees with radioactive phosphorus, the exchange of calcium in the organism of chickens (?), etc. In a resolution also work with stable isotopes and mass spectrographs was described as necessary.

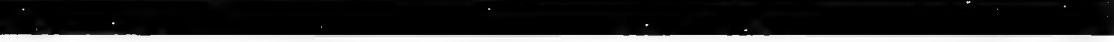
Card 2/3

WILFREDS, S.

OF PERIODICALS.
PERIODICALS: VESTIS No.1, 1958

WILFREDS, S. Determination of nitrofuran solubility in water by the help of polarography. In Russian. 113 p.

Monthly list of East European Accessions (FEAT) '58, Vol. 2, No. 2,
February 1958, "Inclase".



GILLER, S. A.

"Informed the assembly of the intention of Latvia (latvija) scientists to carry out research on the use of natural polymers"

report presented at the session of the Presidium of the Council for Co-ordination of Scientific Work of the Academies of Sciences of Union Republics and Branches (on Development of Researches on Highly Molecular Compounds)
21 June 1958. (Vest. Akademii SSSR, 1958, No. 9, pp. 101-104)

Corresponding Member, AS Latviyskaya SSR

Hillerup

APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R000515110002-6
CIA-RDP86-00513R000515110002-6"

piperazine, and 1-methylpyrrolidine was investigated for the 1st time. Similarly to phenyl bromide, III reacted with equimolar amounts of the above-mentioned tertiary amines in CH_3O to give high yields of the corresponding ammonium salts. III reacted analogously with hexamethylenetetramine in various org. solvents, e.g. in CHCl_3 , PhCl_2 , and CCl_4 , at room temp., to give a high yield of 2-furylhexamethylenetetramonium (IV) salt (89% in CHCl_3). The splitting of IV bromide by HCl in an alc. medium yielded 60% 2-aminoacetyl furan-HCl (V.HCl), which treated with HgCl_2 yielded V. HgCl_2 . The acetylation of V.HCl by an excess of Ac_2O in H_2O at 0° with the addition of NaHCO_3 yielded 81% 2-acetamidoacetyl furan (VI). The hydroxymethylation of VI with 30% sol. HCHO at 85° in the presence of NaHCO_3 yielded 60% 1-(α -furyl)-2-acetamido-3-hydroxy-1-propanone (VII). The 5-nitro deriv. of III with hexamethylenetetramine in CHCl_3 yielded 70% 5-nitro-2-acetylhexamethylenetetramonium bromide (VIII). VIII treated with HCl in an alc. soln. yielded 18% 5-nitro-2-acetoxyacetyl furan-HCl (IX.HCl), which was sepd. from the salt by both, with acetone after filtration of the ammonium salts. Contrary to V.HCl, IX.HCl was quite hygroscopic and unstable. Owing to a high sensitivity towards alkali metals, 5-nitro-2-bromoacetyl furan (X) did not form NH_3 salts with secondary and tertiary amines: Et_2NBr in glacial AcOH , and X yielded 5-nitro-2-acetophenoxyacetyl furan (XI) which hydrolysed to 5-nitro-2-hydroxyacetyl furan (XII). A simpler method of substitution of Br in X by the hydroxyl group by the action of Na formate in MeCN , on heating, did not give pure results. In an analogous manner 90% 2-hydroxyacetyl furan was obtained I, on III, and only 12% by the action of HNO_2 on V.HCl. The hydrazones deriv.

Distinct: 4E2e(j)/4E3d

Saldaholm, N. 2. Hilleröd, S.

II, 222-3^a (decomp.); XV, NNHCOC(=N)CH₂OH·OP(O)(OEt)₂, 213-14^a (decomp.); CH(NHAc)CH₂OH, NNHC₂H₄(NO₂)₂, 214, 215-6^a (decomp.); CH₂N(CH₃)₂OCH₂CH₂HCl, NNHC₂H₄(NO₂)₂-2, 4, —, 178-9^a (decomp.); CH₂Si(Me₂Bz)₂, (XVI), NNHC₂H₄(NO₂)₂-3, 6, 73, 197-8^b (decomp.); CH₂SH, NNHC₂H₄(NO₂)₂-3, 4, 68, 174-5^b (decomp.); V, Cl atom, NNHC₂H₄(NO₂)₂, 35, 168-9^b (decomp.); CH₂Br, NNHC₂H₄(NO₂)₂, 48, 155-7^b (decomp.); R' = p-methoxyphenyl, CH₂O₂C, NNHC₂H₄(NO₂)₂, 77, 201-2^b (decomp.); CH₂SO₂Ph, NNHC₂H₄(NO₂)₂-2, 4, 55, 175-7^b (decomp.).

3

Syntheses with methyl 2-furyl ketones. II. α -Bromination of methyl 2-furyl ketone and its 5-nitro derivative. N. Saldzhols and S. Hillers. Latvijas PSR Zinatnu Akad. Preces 1958, No. №1-2 (in Russian); cf. C.A. 53, 11334g.
--The reaction of α -bromination of Me 2-furyl ketone and Me 5-nitro-2-furyl ketone was investigated, with the use of Br₂, chlorane dibromide (I) and *N*-bromosuccinamide. I was found to give the best results with 70% and 80% yields of corresponding products, resp.; 18 references. M.D.

3
3 May
TE2c yj

99

Some new chloromercurifurans. S. Hiller and Z. Zel-
mane. *Zembla PSK Zinovii Akad.* 1938, No. II,
97-101 (in Russian).—5-Chloromercuri-2-methoxyfuran,
m. 68-9° (BrOH) (decompn.), 5-chloromercuri-2-aceto-
furan (I), m. 142° (decompn.), and 5-chloromercuri-2-
methylmercaptofuran, m. 88°, were prep'd.; the semicar-
bazone of I m. 118° (decomp.). Michael Dymick

3
211 ay
4E 3d
4E 2c (y)

949

HILLERS, S.
Dokstr. 4B2a(j)/4B3d

The question of the multiplicity of the bond between atoms 3 and 4 in the furan ring. S. Hillers and G. Sokolovs (Inst. of Org. Synthesis, Latv. Acad. Sci., Riga). *Latvijas PSR Zinat. Akad. Vests* 1958, No. 12, 125-8 (in Russian); cf. *C.A.* 57, 2358; 31, 6200; 33, 8065; 38, 5701^a; 43, 4918a; 47, 4356a. —Ultraviolet absorption spectra were dect. from 320 to 620 m μ , for solns. 0.0001M. solute in abs. EtOH, with an SP-4 quartz photoelct. spectrograph for β,β' -bis(δ -nitrofurylidene)dihydrizide of succinic acid (I); β,β' -bis(δ -nitrofurylidene)dihydrizide of fumaric acid (II); β,β' -bis(δ -nitrofurylidene)dihydrizide of acetyl-enedicarboxylic acid (III); and β,β' -bis(δ -nitrofurylidene)dihydrizide of 3,4-furanedicarboxylic acid (IV). Spectra of I to IV are presented. The % yield of the preprns. and their m.p.'s are, resp.; I 90, 230-7 (decomp.); II 97, >300 (decomp.); III 84, 237-8 (decomp.); IV 99, 230-7 (decomp.). Details of the preprns. of I-IV are given. The wave lengths (m μ) of peak absorption and the corresponding extinction coeffs. are: I 260 (2000), 360 (2700);

II 240, (2800), 370 (2750); III 300 (2820); and IV 200 (1632), 360 (1030). From the ultraviolet spectra it is believed that IV shows evidence for partial double bond character and thereby establishes evidence for some aromatic character of the furan ring. R. W. Kiser

HILLERS, S.; Murgan, B.; Saldabola, N.

A method for the preparation of 5 nitropyromuic acid. In Russian. p. 49.

LATVIIAS PSR ZINATNU AKADEMIJA. VESTIS. RIGA, LATVIA. No. 3, 1959

Monthly List of East European Accessions. (EEAI) LC, Vol. 9, no. 2,
Feb. 1960 Uncl.

GILLELS
1
Synthesis in the methyl 2-furyl ketone series. IV.
Dialkylsulfonium derivatives of methyl 2-furyl ketone and
methyl 5-nitro-2-furyl ketone. N. Saldahols and S. Hillars.

3
1-4-9(12)
Latvijas PSR Zinātņu Akad. Vēstis 1959, No. 3, 53-6(in

Russian); cf. C.A. 53, 21862b.— $\left[O.CH:CH.CH:CCOCH_2SR_4\right]^{+}Br^-$, where R = Me(I), Et(II), Bu(III), and iso-pentyl(IV), were prepd. by treating 0.03 mole bromoethyl 2-furyl ketone with 0.03 mole dialkyl sulfide in 12 ml. Me_2CO at 0° for 3-7 days; the yellowish ppt. was filtered off, washed with Me_2CO and Et_2O , and recrystd. from $EtOH$; I m. $149-51^\circ$, yield 68%; II m. $102-4^\circ$, yield 58%; III m. $105-8^\circ$, yield 37%; IV m. $98-9^\circ$, yield 42%. [O.C-

$(NO_2)_2:CH.CH:CHCOCH_2SR_4\right]^{+}Br^-$, where R = Me(V), Et(VI), Pr(VII), Bu(VIII), and iso-pentyl(IX), were prepd. by treating 0.005 mole bromomethyl 5-nitro-2-furyl ketone with 0.008 mole dialkyl sulfide in 4 ml. Me_2CO off for 1-2 days at room temp.; the yellowish ppt. was filtered off, washed with Et_2O , and ptd. from $EtOH$ soln. by Et_2O . V m. $133-4^\circ$, yield 87%; VI m. $112-14^\circ$, yield 84%; VII m. $105-8^\circ$, yield 47%; VIII m. $84-5^\circ$, yield 36%; IX m. $89-90.5^\circ$, yield 64%.

Bimal C. Pal

HILLERS, S.; Stradins, J.; Ratenbergs, N.

Dynamics of the secretion of some new nitrofuran preparation series from
the organism; task and study method. In Russian. p. 107

LATVIIAS PSR ZINATNU AKADEMIJA. VESTIS. RIGA, LATVIA. No. 3, 1959

Monthly List of East European Accessions. (EEAI) LC, Vol.9, no. 2,
Feb. 1960 Uncl.

GILLER, S

Diatri: 4E2c(j)/4B3d

✓ Alkylation of furan by olefins. II. Increase of increment of molecular refractions of mono- and polyalkylfurans.
S. Hiller and A. Pergina. *Latomus PSR Zinotex Akad.*,
Visir 1959, No. 5, 100-14. Treating 2-ethyl-3-acetyl furan
with hydrazine yielded 2-ethyl-3-acetyl furan hydrazone (I).
Treatment of I with Ca(OH)_2 at 20° yielded 45% 2,5-di-
ethyl furan, b. 108-10°, n_D^{20} 1.4700, d_{40}^2 0.8990; maleic an-
hydride adduct m. 118°. Similarly, starting with 2,5-di-
methyl-3-acetyl furan hydrazone, 77% 2,5-dimethyl-3-ethyl-
furan was prep'd., b. 130°, n_D^{20} 1.4622, d_{40}^2 0.8990.
Mol. refractions for these furans were detd. and compared
with calcd. values. When the increment of 0.766, charac-
teristic of the furan ring was added to the sum of at.
refractions in calcd. values, they agreed closer with expd.
values.

V. S. Mikhajlov

3
1 - Jel (nB)
2

GILLER, S A

Distr: 4E2e(j)/4E3d

Nitration of 2-furyl- β -nitroethylene. S. Hiller and M. Berkay. *Lekijas PSR Zinātņu Akad. Viestis* 1939, No. 5, 115-11. The yield of β -nitro-2-furyl- β -nitroethylene (I) in nitration of 2-furyl- β -nitroethylene by concd. HNO_3 (II) in Ac_2O was max. when the molar ratio of I to II was 1:4. This modified method gave 70-80% yields when dioxane was used for recrysta.

V. S. Mihailov

3
1- β -N(β)
2

STRADYN' Ya. [Stradins,J.] (Riga); GILLER, S. [Hillers,S. (Riga); DZENE, A.
(Riga)

Polarographic reduction of some derivatives of 5-nitrofuran,
possessing chemotherapeutic activity. Vestis Latv ak no.12:71-78
'59. (EEAI 9:11)

1. Akademiya nauk Latviyskoy SSR, Institut organicheskogo sinteza.
(Polarograph and polarography)
(Nitrofuran)

5.4600
5.3100

67264

5-(3)

AUTHORS: Stradin', Ya., Giller, S., Academician SOV/20-129-4-28/68
AS LatvSSR, Tur'yev, Yu.

TITLE: Polarographic Reduction of 2-Nitrofuran Derivatives and
2-Nitroselenophene Derivatives

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 4, pp 816 - 819
(USSR)

ABSTRACT: The authors ascertained the influence exercised by the substituents in the 5th position of the furan- and selenophene cycle on the polarographic reduction process of the nitro groups in the second position. Thus, they completed the data of publications by new examples. The derivatives mentioned in the title may now be compared to the nitro derivatives of the aromatic series. Table 1 gives the derivatives I-XXV investigated in the present paper under vigorous conditions. It was found that the mechanism of polarographic reduction of the mentioned derivatives is the same as that of nitrobenzene- (Ref 7) and of 2-nitrothiophene (Ref 11) derivatives. Also the semwave potentials $E_{1/2}$ of the nitro derivatives of the mentioned series are closely related. The comparison of these series leads to the conclusion that the nitro group of 2-nitrofuran derivatives is the most easily to be

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67264

Polarographic Reduction of 2-Nitrofuran Derivatives and SOV/20-129-4-28/68
2-Nitroselenophene Derivatives

reduced. This is more difficult in the case of 2-nitrothiophene- and 2-nitroselenophene (which requires by 20-30 mv more) and still more difficult for nitrobenzene derivatives (by 40 mv more). From the investigation of this series of derivatives the influence exercised by the substituents on the polarographic reduction of the nitro group may be quantitatively estimated on the basis of the $E_{1/2}$ displacement of the substituted compound compared to the non-substituted one. In the series of nitrobenzene and nitrothiophene this displacement may be expressed by the Hammett equation. It may be concluded from the data given by the authors that this holds also for the derivatives mentioned in the title if the same values of σ are assumed for the substituents in the heterocycles as apply for the aromatic series, and if the numerical values of $\Delta E_{1/2}$ and ρ are compared for an equal pH value in a weakly acid medium. The behavior of the 2,5-substituted derivatives of the 5-membered heterocycles corresponds to the behavior of the p-substitutes of the aromatic series. The behavior of the former however strongly differs from that of the m-substitutes. This agrees on the whole with the rules of

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67264

Polarographic Reduction of 2-Nitrofuran Derivatives and SOV/20-129-4-28/68
2-Nitroselenophene Derivatives

orientation found in the study of the reactivity of the substituted furans. However, further polarographic measurements are necessary in this case. The influence exercised by the substituents over an additional group -CH=CH- in the side chain is in general not high. The reduction of 5-nitro furfural proceeds in a characteristic manner (Scheme). There are 1 table and 16 references, 9 of which are Soviet.

ASSOCIATION: Institut organicheskogo sinteza Akademii nauk LatvSSR (Institute of Organic Synthesis of the Academy of Sciences of the Latvian SSR), Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 21, 1959

Card 3/3

GILLER, S. A.

PHASE I BOOK EXPLOITATION \$274/2350

Sovetskoye po knizhnoj, tekhnologii i priemaniyu proizvodnykh
piridina i khinolina. Riga, 1957

Khimiko-tehnologicheskie primeneniya proizvodnykh piridina i
khinolina: materialy soveshchaniya (Chemical Technology,
and Utilization of Pyridine and Quinoline Derivatives;
Materials of the Conference) Riga, Izd-vo Akademii
SSR, 1960. 299 p. Create slip inserted.

Sponsoring Agencies: Akademiya nauk Latvийskoy SSR. Institut
khimii. Vsesoyuznoye nauchno-tekhnicheskoye obshchestvo.

Ed.: S. Butanov; Tech. Ed. A. Klyavitskij. Editorial
Board: Yu. A. Berezovskij, V. G. Gavrilov, E. V. Zil'ukov, V.
Vanev, Candidate of Chemistry, and M. M. Kalinin.

PURPOSE: This book is intended for organic chemists and
chemical engineers.

CONTENTS: The collection contains 33 articles on methods
of synthesizing or producing pyridine, quinoline, and
their derivatives from natural sources. No personalities
are mentioned. Pictures, tables, and references accompany
the articles.

III. SYNTHESIS BASED ON PYRIDINE AND QUINOLINE

Sh. Ramazanov, N. V. Kostyleva, and S. A. Gerasimov [Institute for
Organic Synthesis, USSR Academy of Sciences, Institute for
Semi-, Vapor Phase, Contact Oxidation of Pyridine]

185

Voropai, A. P., N. V. Kostyleva, N. V. Tuzitseva, and L. V.
Vaynshteyn [Vsesoyuznyy nauchno-tekhnicheskoye obshchestvo Akademii
Nauk SSSR (All-Union Motion Picture Scientific Research
Institute)]

Quinoline Salts and Salts of γ -Butyryl (Benzoyl) Pyridine

Stepan'yan, E. N., and N. A. Sosulin [Fakultet organicheskoy
khimii Novosibirskogo universiteta (Novosibirsk University),
Institut Vysokomolekulovyykh sostoianiy Poluproduktov
i Keratolyzha Polyp. SSSR (Department of Organic Chemistry
of the Novosibirsk Institute for Polymer Products), All-Union
Scientific Research Institute for Synthetic Polymers, Akademii
Nauk, Ministry of the Chemical Industry (Moscow),
Institution of Dyes], Pyridine with Keto Halides

203

Vesel'man, O. N., and N. N. Kostyleva [Bashkir Academy of Sciences,
Institute of Organic Chemistry, Institute of Chemical
Technology, USSR (Ufa Chemical Institute), Institute of
Organic Synthesis], The Use of Activated Nitrogen
Blocking and Compressive Substances For Synthesis of Gaseous
Zelikson, V. V., and Yu. V. Tuzitseva [Institut khimii
Akademii Nauk SSSR (Institute of Chemical Physics of the
Academy of Sciences, Latvian SSR, SSSR), Synthesis and Re-
action of α -Heterocyclic Compounds]

223

Card 8/10

SHIMANSKAYA, M.(Riga); GILLER, S.[Hillers, S.](Riga)

Effect on the activity of the content of vanadous catalysts in the
process of vapor-phase furfurole oxidation. Vestis Latv ak no.9:
93-102 '60.
(KEAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut organicheskogo sinteza.

(Catalysts) (Vanadium) (Furaldehyde)

ELYUGER, A.P.; GILLER, S.A.; SHENIGSON, B.S.

Studies on the antilamblial effect of nitrofurans and first results of their use in the treatment of human lambliasis. Med. paraz. i paraz.bol. 29 no.6:646-647 '60. (MIRA 14:2)

1. Iz Instituta organicheskogo sinteza Akademii nauk Latviyskoy SSR, Rizhskogo meditsinskogo instituta i Respublikanskoy sanitarno-epidemiologicheskoy stantsii Latviyskoy SSR.
(GIARDIASIS) (FURAN)

SHIMANSKAYA, Mariya Vladislavovna; SLAVINSKAYA, Valentina Aleksandrovna;
GILLER, S.A., akademik, red.; DYMARSKAYA, O., red.; LEMBERGA, A.,
tekhn. red.

[Analysis of furfurole] Analiticheskoe opredelenie furfurola. Riga,
Izd-vo Akad. nauk Latviiskoi SSR, 1961. 182 p. (MIRA 14:11)

1. Akademiya nauk Latviyskoy Sotsialisticheskoy Respubliki (for Giller)
(Furaldehyde)

LUKEVITS, E.[Lukevics, E.](Riga); GILLER, S.[Hillers, S.](Riga)

Reaction of triethylsilane with mercury salts. Vestis Latv ak
no.4:95-98 '61.

1. Akademiy nauk Latviyskoy SSR, Institut organicheskogo sinteza.

(Triethylsilane) (Mercury)

53700 2209

24115
S/197/61/000/004/003/004
B101/B229

AUTHORS: Lukevits, E., Giller, S.

TITLE: Syntheses in the series of furan-containing organosilicon compounds. Information I. Reduction of furyl-, phenyl-, and thiienyl mercury chloride by means of triethyl silane

PERIODICAL: Izvestiya Akademii nauk Latviyskoy SSR, no. 4, 1961, 99-102

TEXT: The purpose of the present work was to investigate the interaction between organomercury furan derivatives and silanes to obtain furyl silanes. The tests showed that furyl mercury chloride neither reacts with SiF_4 , SiCl_4 in benzene, nor with $(\text{C}_2\text{H}_5)_3\text{SiCl}$ dissolved in oxygen. A reaction was not achieved, neither after 24 hr nor at 145°C . If, however, triethyl silane was used instead of halogen silane, furyl mercury chloride was reduced with separation of mercury. Triethyl silane showed the same reducing effect with thiienyl mercury chloride and phenyl mercury chloride. The reaction is accelerated if it is achieved in a solvent (dioxane, alcohol, or pyridine). In anhydrous pyridine the rate of reduction increases in the

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24115

S/197/61/000/004/003/004
B101/B229

Syntheses in the series ...

order: phenyl mercury chloride < furyl mercury chloride < thietyl mercury chloride. If a reaction is achieved without a solvent, or in dioxane, triethyl silane changes to triethyl-chlorosilane. If ethanol is used as solvent, triethyl silane changes to triethyl ethoxy silane. In pyridine a complex is formed from triethyl chlorosilane and pyridine. After decomposition of the reaction mixture by means of water, and extraction by means of ether, the ether extract contains only triethyl silanol and the corresponding hydrocarbon: benzene (identified as m-dinitro benzene), thiophene (identified as thietyl mercury chloride), or furan (proved by qualitative reactions). From this the following reaction may be assumed:

$\text{RHgCl} + (\text{C}_2\text{H}_5)_3\text{SiH} \rightarrow \text{RH} + \text{Hg} + (\text{C}_2\text{H}_5)_3\text{SiCl}$; R = furyl-, thietyl-, or phenyl radical. Difuryl mercury, dissolved in pyridine, could not be reduced by triethyl silane. For the reaction of triethyl silane with phenyl mercury chloride, it is indicated: to 15.7 g phenyl mercury chloride, 4 g pyridine and 5.8 g triethyl silane were added, the solution was boiled for 4hr. After cooling off, 9.6 g Hg (-96%) were filtered off. The fraction distilled off at 80-81°C was nitrified. By crystallization from ethanol the m-dinitro benzene was obtained. At 146 - 148°C triethyl chlorosilane distilled over. If water was added to the solution filtered off from Hg,
Card 2/4

24115

S/197/61/000/004/003/004
B101/B229

Syntheses in the series ...

extracted with ether, the triethyl silanol distilled over from the extract at 153 - 154°C. The reaction with other mercury compounds was carried out in the same way. The results are shown in Table 2:

Hg compounds,	mole	$(C_2H_5)_3SiH$, mole	solvents	duration of reaction, hr	obtained Hg, %
Phenyl mercury chloride	0.05	0.05	without dioxane	55	12.6
ditto	0.1	0.1	dioxane	36	80
furyl mercury chloride	0.05	0.05	ethanol	4	98
phenyl mercury chloride	0.1	0.1	pyridine	2	78.4
furyl mercury chloride	0.1	0.1	pyridine	2	86.25
thienyl mercury chloride	0.1	0.1	pyridine	2	98

A paper by Z. M. Manulkin (Ref.10: ZhOKh, 1946, 16, 235) is mentioned.

Card 3/4

24115

Syntheses in the series . . .

S/107/61/000/004/004/004
B101/B229

There are 2 tables and 14 references: 5 Soviet-bloc and 9 non-Soviet-bloc.
The most important reference to English-language publication reads as
follows: R. Benkeser, D. Hoke, R. Hickner, J Am Chem Soc., 1959, 80,
5294.

ASSOCIATION: Institut organicheskogo sinteza AN Latv SSR (Institute of
Organic Synthesis, AS Latviyskaya SSR)

SUBMITTED: January 13, 1961

Card 4/4

VENTER, K.[Venter, K.]; ^{A:} CILLER, S.[Hillers, S.]; LAZDYN'SH, A.[Lazdins, A.]

Synthesis in the series of 5-nitro-2-furylpolyalkenyls and 5-nitro-2-furylpolyalkenes. Report 4. Nitration of β -(furyl)-acrolein and synthesis of certain unsaturated furan aldehydes and ketones. Vestis Latv ak no.5:87-97 '61.

1. Akademiya nauk Latviyskoy SSR, Institut organicheskogo sinteza.

LUKEVITS, E.[Lukevics, E.]; GILLER, S.[Hillers, S.]

Interaction of triethylsilane with mercury salts. Izv. AN Latv.
SSR no.4:95-98 '61. (MIRA 16:1)

1. Institut organicheskogo sinteza AN Latviyskoy SSR.

(Silane) (Mercury salts)

LIDAK, M. [Lidaks, M.]; GILLER, S. [Hillers, S.]

Some reactions of ethylenimine. I. Reaction of ethylenimine with aliphatic and carbocyclic aldehydes and ketones. Vestis Latv ak no.5: 99-108 '61.

1. Akademiya nauk Latviyskoy SSR, Institut organicheskogo sinteza.

LIDAK, M. [Lidaka, M.]; GILLER, S. [Hillers, S.]

Some reactions of ethylenimine. II. Reaction of ethylenimine with
benzaldehyde, furfural and their derivatives. Vestis Latv ak no.7:
49-58 '61.

1. Akademiya nauk Latviyskoy SSR, Institut organicheskogo sinteza.

(Ethylenimine) (Benzaldehyde) (Furaldehyde)

5 3700

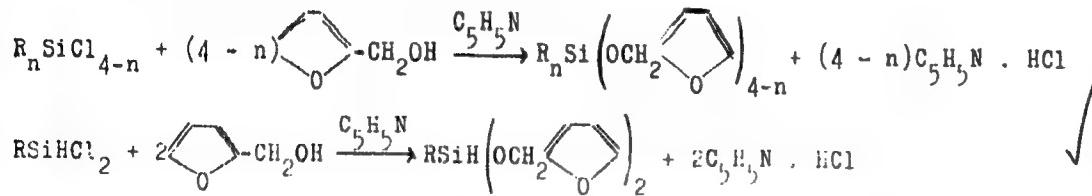
S/197/61/000/007/002/002
B117/B101

AUTHORS: Lukevits, E., Romadan, Yu., Giller, S.

TITLE: Syntheses in the series of furan-containing organosilicon compounds, synthesis of furfuryloxy silanes

PERIODICAL: Izvestiya Akademii nauk Latveyskoy SSR, no. 7 (168), 1961,
59-61

TEXT: The authors employed three methods for producing furfuryloxy silanes. Most of these compounds were prepared by the interaction of alkylchlorosilanes R_nSiCl_{4-n} and alkyldichlorosilanes $RSiHCl_2$ with furfuryl alcohol in the presence of pyridine (method A):

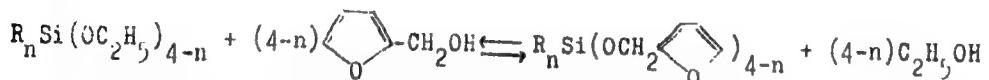


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Syntheses in the series of ...

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The reactions were made in a three-necked flask with mechanical stirrer, dropping funnel, and reflux cooler with calcium chloride tube. In the case of $C_2H_5SiHCl_2$ not only ethyl difurfuryloxy silane but also ethyl trifurfuryloxy silane were isolated. This indicates that the reaction partially proceeds via the Si-H bond. Re-esterification of ethoxy silanes with furfuryl alcohol (method 5) is simpler from the experimental point of view:



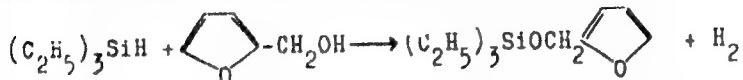
In some cases, however, the reaction proceeds slowly and the separation of the main product is rendered difficult by the impurities of the partially substituted esters. The best results could be obtained when using sodium furfurylate as a catalyst. The reactions were made in a distilling flask with dephlegmator in oil bath. For the production of trialkyl furfuryloxy silanes dehydrocondensation of hydride silanes with alcohols in the presence of metallic sodium (Ref. 11: B. N. Dolgov, N. P. Kharitonov, M. G. Voronkov, ZhOKh, 24, 1178, (1954)) was successfully employed (method 6).

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S/197/61/000/007/002/002
B117/B101

Syntheses in the series of ...

In this case the highest yields were obtained:



Using these three methods the entire series of methyl furfuryloxy silanes, and ethyl furfuryloxy silanes as well as methyl ethyl difurfuryloxy silane, ethyl dipropyl furfuryloxy silane, trifurfuryloxy silane and tetra-furfuryloxy silane were obtained (Table 1). Most of the furfuryloxy silanes are colorless liquids with a characteristic smell and turning yellow on standing. At temperatures of 145°C and higher, the furfuryloxy silanes distilled in the vacuum are yellowish. The furfuryloxy silanes are soluble in ether, ethanol, benzene, and toluene, and insoluble in water. On heating they are gradually polymerized while forming brown non-distillable, highly viscous substances. All frequencies characteristic of the disubstituted furans can be observed in the infrared spectrum (Table 2). There are 2 tables and 17 references: 8 Soviet-bloc and 9 non-Soviet-bloc. The three most important references to English-language publications read as follows: Ref. 15: A. Cross, S. Stevens, T. Watts, J. Appl. Chem., 1,

Card 3/7

Syntheses in the series of ...

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8117/B101

562 (1957); Ref. 16: N. Wright, W. Hunter. J. Amer. Chem. Soc., 69, 803 (1947); Ref. 17: A. Katritzky, I. Lagovski. J. Chem. Soc., 1959, 657.

ASSOCIATION: Institut organicheskogo sinteza AN Latv. SSR (Institute of Organic Synthesis AS Latviyskaya SSR)

SUBMITTED: May 6, 1961

Table 1: constants of furfuryloxy silanes.

Legend: 1) furfuryloxy silane; 2) synthesis method; 3) boiling temperature, °C; 4) pressure, mm Hg; 5) found; 6) calculated; 7) yield %.

Table 2: infrared absorption spectra of furfuryloxy silanes.

Legend: 1) compound; 2) valence vibrations of the furan ring; 3) pulsation of the ring; 4) deformation vibrations of the C-H bond; 5) planar; 6) extra-planar; 7) references; 8) vibrations of the Si-x bond; 9) deformation vibrations; 10) other frequencies.

Card 4/7

SLAVINSKAYA, B.A.; SHIMANSKAYA, M.V.; GILLER, S.A.; IOFFE, I.I.

Kinetics of the vapor-phase contract oxidation of furfurole.
Kin. i kat. 2 no.2:252-257 Mr-Ap '61. (MIRA 14:6)

1. Institut organicheskogo sinteza AN Latviyskoy SSR, Riga i
Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley imeni K. Ye. Voroshilova.
(Furaldehyde) (Oxidation)

ZAYEVA, S.P.; GILLER, S.A.; GERMANE, S.K.; STRADYN', [Stradin, J.P.];
ALEKSEYEVA, L.N.; KRUZMETRA, L.V.; AL'BERTE, M.A.; AYZPURIETE,
I.F.[Aizpuriete, I.F.]; KALNBERG, R.Yu. [Kalnberg, R.J.]

Experimental study of furazolin (F-150), a new preparation of the
nitrofuran series. Zhur.mikrobiol., epid. i immun. 32 no.10:
17-20 0 '61.
(MIRA 14:10)

1. Iz Instituta organicheskogo sinteza AN Latviyskoy SSR.
(FURAN)

Ж.Л. Гиллер, к.х.н.; GILLER, S.I., akademik

Nitration of some β -unsaturated aldehydes and ketones of the furan series. Dokl. Akad. Nauk Latv. SSR 137: o. 1:83-86 Mr-Ap '61.
(NICA 14:2)

1. Institut organicheskogo sintza AN Latviyskoy SSR. 2. AN
Latviyskoy SSR (for Giller).
(Aldehydes) (Ketones) (Nitration)

VENTER, K.K.; GILLER, S.A., akademik; KUCHEROV, V.F.; TSIRULE, V.V.
[Cirule, V.]; KARKLINYA, A.M. [Karklina, A.]

Syntheses in the domain of 5-nitrofuryl-2-polyalkenals and
5-nitrofuryl-2-polyalkenones. Reaction of carbethoxymethylene-
triphenylphosphorane and acetylmethylenetriphenylphosphorane
with α -unsaturated and polyene aldehydes of the 5-nitrofuran
series. Dokl. AN SSSR 140 no. 5:1073-1075 O '61.
(MIRA 15:2)

1. Institut organicheskogo sinteza AN Latviyskoy SSR.

2. AN Latviyskoy SSR (for Giller).

(Phosphorane)

(Furan)

(Aldehydes)

EYDUS, Ya.A. [Eiduss, J.]; VENTER, K.K.; GILLER, S.A., akademik

Effect of terminal substituents in 5-nitrofurylpolyene derivatives
on their electron spectra. Dokl. AN SSSR 141 no.3:655-658 N '61.
(MIK 14:11)

1. Institut organicheskogo sinteza AN Latviyskoy
SSR i Latviyskiy gosudarstvennyy universitet im. P. Stachki.
2. AN Latviyskoy SSR (for Giller).
(Olefins—Spectra)

STRADYEV, YA.P. AND GILLER, S.A.

"Die polarographische untersuchung einiger chemotherapeutika der nitrofuranreihe."

Report submitted to the Oscillopolarography Course and Polarography Symp.
Jena, GDR 10-15 Sep 1962

GILLER, S.A., otv. red.; BLYUGER, A.F., red.; SHIMANSKAYA, M.V., red.;
DYMARSKAYA, O., red.; LEMBERGA, A., tekhn. red.

[Furazolidone] Furazolidon. Riga, Izd-vo Akad. nauk Latviiskoi
SSR, 1962. 145 p.
(MIRA 15:12)

1. Latvijas Padomju Socialistiskas Republikas Zinatnu Akaderija.
Organiskas sintezes institut. 2. Direktor Instituta organicheskogo
sinteza Akademii nauk Latviyskoy SSR (for Giller). 3. Institut or-
ganicheskogo sinteza Akademii nauk Latviyskoy SSR (for Shimanskaya).
4. Kafedra infektsionnykh bolezney Rizhskogo meditsinskogo instituta
(for Blyuger).

(OXAZOLIDINONE)

SLAVINSKAYA, V.A.; GULEVSKIY, E.K.; SHIMANSKAYA, M.V.; GILLER, S.A.;
IOFFE, I.I.

Kinetics of furfurole catalytic oxidation. Kin.i kat. 3
no.2:276-281 Mr-Ap '62. (MIRA 15:11)

1. Institut organicheskogo sinteza AN Latvийskoy SSR, Riga i
Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley imeni K.Ye.Voroshilova, Moskva.
(Furaldehyde) (Maleic anhydride) (Catalysts)

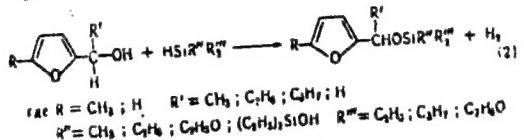
S/020/62/145/004/017/024
B110/B144

AUTHORS: Lukevits, E. Ya., Romadan, Yu. P., Giller, S. A., Academician AS LatSSR, and Voronkov, M. G.

TITLE: Organosilicon compounds of the furan series. Organosilicon derivatives of furyl carbinols and 5-substituted furfuryl alcohols

PERIODICAL: Akademija nauk SSSR. Doklady, v. 145, no. 4, 1962, 806 - 808

TEXT: Furfuryl oxysilanes were produced: (1) by reaction of trialkyl chlorosilanes with furyl alkyl and furyl aryl carbinols, (2) by reaction of silanes with furfuryl alcohol, 5-methyl furfuryl alcohol, and furyl alkyl carbinols



using 10^{-5} moles of K_2PtCl_6 per 1 mole of isopropyl alcohol as catalyst at

Card 1/8 2

3/020/62/145/004/017/024
B110/B144

Organosilicon compounds of the ...

80 - 100°C. Their composition and properties are indicated (Table).
5-nitro-furfuryl oxytrimethyl silane was obtained from ethereal solutions
of 5-nitro-furfuryl alcohol, pyridine, and trimethyl chlorosilane.
Silane reacts with H_2PtCl_6 in isopropyl alcohol to give furfuryl oxysilane.
Silane containing 0.05 moles of H_2O hydrolyzes triethyl silane in the
presence of H_2PtCl_6 to give triethyl silanol. Triethyl silane reacting
with triethyl silanol in the presence of H_2PtCl_6 yields small amounts of
hexaethyl disiloxane by anhydrocondensation. There is 1 table.

ASSOCIATION: Institut organicheskogo sinteza Akademii nauk LatvSSR
(Institute of Organic Synthesis of the Academy of Sciences
LatSSR)

SUBMITTED: March 12, 1962

Table. Furfuryl oxysilanes ($R' - \text{C}_5\text{H}_4 - R'$). Legend: (1) mode of production,
(2) boiling point, °C, (3) pressure, mm Hg.

Card 2/12

GILLER, S.A., akademik; MEDNE, K.K.; VENTER, K.K.; GERMANE, S.K.;
ZILE, A.Ia.

Tuberculostatic effect of certain derivatives of unsaturated
aldehydes and ketones of the 5-nitrofuran series. Dokl.AN SSSR
144 no.1:108-111 My '62. (MIRA 15:5)

1. Institut organicheskogo sinteza AN Latv SSR. 2. AN Latv SSR
(for Giller).
(Tuberculosis--Prevention) (Furan)